

REMARKS

The present Amendment is in response to the Office Action having a mailing date of September 28, 2004. Claims 1-43 are pending in the present Application. Claims 1-43 are rejected under 35 USC 102 and 35 USC 103. Claims 1, 14, 21, 26, 30 and 37 have been amended for clarification. Support for the amendments are found generally throughout the specification and specifically at page 8, lines 6-25. Consequently, claims 1-43 remain pending in the present application.

Present Invention

The present invention discloses a method and system for minimizing code needed in a client to synchronize data records in the client with data records in a server system. The method and system of the present invention includes creating setup information in the client and providing the same to the server, wherein the setup information enables the server system to identify the client, then identify information the server system needs for synchronization and to provide appropriate commands for the client.

Through aspects of the method and system of the present invention, the client detects and dumps a changed record in the client database, and transmits the changed record, as it existed in the client database, to the server. At the server, the server is able to interpret the changed record based on the setup information, and the server updates its database. Then, again using the setup information, the server compiles a program to update the client database, and transmits the program to the client, where it is executed to update and synchronize the client database.

According to the method and system of the present invention, the amount of software required for synchronization in the client is dramatically reduced because the client is no longer

required to construct a standardized document comprehensible by the server system. Moreover, the client is able to execute the program compiled by the server system without additional interpretive code. This makes it possible to offer less expensive client devices with less memory, or allows the client device to utilize available memory for alternative applications. The method and system of the present invention, in essence, transfers the synchronization workload from the client to the server, which is better adapted and equipped to handle such a load.

Claim Rejections-35 USC 112

The Examiner states,

Claim 1-43 the preamble provides for the a method/process and use of minimizing code, but, since the body of the claims does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass and how the body of the claims will minimize the code. Claims 1-43 are indefinite where they merely recite a use without any active, positive steps delimiting how this use is actually practiced.

Applicant respectfully disagrees. The present claims are all directed toward the minimizing code needed in a client when synchronizing data records as has been above-stated. This is accomplished through use of the setup information. Accordingly, applicant respectfully submits that the claims are clear and definite and the rejection under 35 USC 112 has been overcome.

Claim Rejections-35 USC 102

The Examiner states,

1. Claims 1-11, 14-24, and 26-43 are rejected under 35 U.S.C. as being anticipated by Bauer et al. (US Patent No. 6,591,272).

Regarding claims 1 and 14, Bauer discloses a method and a computer readable for minimizing code needed in a client to synchronize data records in the client with data records in a server system, comprising the steps of:

(a) creating setup information in the client, wherein the setup information enables the server system to identify the client and to provide appropriate commands for the client (see columns 13, 14, lines 64-67, 1-6, respectively Bauer); and

(b) providing the setup information from the client to the server system to allow for synchronization of the data records (see column 9, lines 36-41, Bauer).

Claim Rejections – 35 USC 103

The Examiner states,

Claims 12, 13 and 25 rejected under 35 USC 103(A) as being unpatentable over Bauer (U.S. Patent No. 5,870,759) in view of Alam et al. (U.S. Patent No. 6,324,544).

24. Regarding claims 12, 13, and 25, Bauer discloses at the claimed limitation except for the client to be a mobile client. However, Alam teaches the method of synchronizing data between a mobile client and a database (see column 11, 12, lines 14-67, 1-63, respectively, Alam). It would have been obvious to one of the ordinary skill in the art at the time of the invention to receive update and synchronize data from a handheld or mobile device/client with the motivation of providing access to all types of devices to store data in a database which has more space than the mobile devices which improve the speed of the mobile device and reduce the risk of losing the data since it has been stored on a server.

Applicant respectfully traverses these rejections. Independent claims 1, 14, 21, 26, 30 and 37 are reproduced in their entirety hereinbelow.

1. A method for minimizing code needed in a client to synchronize data records in the client with data records in a server system, comprising the steps of:

(a) creating setup information in the client, wherein the setup information enables the server system to identify the client, to identify where to find information the server system needs for synchronization and to provide appropriate commands for the client; and

(b) providing the setup information from the client to the server system to allow for synchronization of the data records.

14. A computer readable medium containing programming instructions for minimizing code needed in a client to synchronize data records in the client with data records in a server system, comprising the instructions for:

(a) creating setup information in the client, wherein the setup information enables the server system to identify the client, to identify where to find information the server system needs for synchronization and to provide appropriate commands for the client; and

(b) providing the setup information from the client to the server system to allow for

synchronization of the data records.

21. A client computer system for synchronizing data records stored on the client computer system with data records stored on a server system, the client computer system comprising:

a database for storing the data records; and

a processor coupled to the database for creating setup information to the server system, wherein the setup information enables the server system to identify the client, to identify where to find information the server system needs for synchronization and to provide appropriate commands for the client.

26. A server system for synchronizing data records stored on the server system with data records stored in a client computer system, the server system comprising:

means for receiving setup information from the client computer system, wherein the setup information includes information to enable the server system to identify the client computer system to identify where to find information the server system needs for synchronization and to provide appropriate commands for the client computer system;

memory for storing the setup information coupled to the means for receiving;

a processor coupled to the memory; and

a database coupled to the processor for storing the server system data records.

30. A method for synchronizing data records stored on a server system with data records stored in a client computer system while minimizing code needed on the client computer system, comprising the step of:

(a) receiving in the server system setup information from the client computer system, wherein the setup information includes information enabling the server system to identify the client computer system, to identify where to find information the server system needs for synchronization and to provide appropriate commands for the client computer system.

37. A computer readable medium containing programming instructions for synchronizing data records stored on a server system with data records stored in a client computer system while minimizing code needed on the client computer system, comprising the instruction for:

(a) receiving in the server system setup information from the client computer system, wherein the setup information includes information enabling the server system to identify the client computer system, to identify where to find information the server system needs for synchronization and to provide appropriate commands for the client computer system.

Bauer Reference

A database synchronizer facilitates computing systems which have client-side and server-side applications that share data in similar database structures, but which do not maintain a continuous connection to a single shared data source. In general, a database synchronizer is used to share data among many nodes on the computing system. The database synchronizer is used to synchronize the data in a central dates for a particular client with the data on that client's intermittently-connected computer. Updates performed by either client or server are propagated to the other side when a connection is established and eventually from the server to the other clients in the system.

Bauer is not concerned with or directed to minimizing code needed on the client. Instead, it is directed toward utilizing a database synchronizer to synchronize data in a central database for a particular client with the data on a client's intermittently connected computer. This is synchronization is accomplished by submitting updates between the client and the central database. In so doing, the client and the database have the workload for synchronization.

Bauer neither teaches or suggests creating setup information in the client, to identify the client, to identify where to find information the server system needs for synchronization and to provide appropriate commands for the client as recited in all of the independent claims.

At columns 13, 14, lines 64-67, 1,6 respectively, Bauer discloses:

“Figure 7 is a schematic design of a table row message. The table row message 50 includes a message header 52 and a body 54. The header 52 contains the message as either an insert, an update or a delete operation. The body 54 preferably includes a key field for the unique key value identifying the table row in a relational database, a column identification field 57 for identifying the table row in a relational database, a column identification field for identifying columns at which the modified data fields reside and a stream of data values from the replicated database 22X.” This description does not disclose or suggest setup information within the client as recited in the independent claims which enables the server system to identify information the server system needs for synchronization.

Alam is directed to a mobile client. Alam similarly neither teaches nor suggest the recited invention either singly or in combination with Bauer. The combination of Bauer and Alam provides a database synchronizer for synchronizing data between a mobile client and a central database. The mobile client and the centralized database provide updates to each other during connections between the database and the mobile client. There is no teaching or suggestion of the recited setup information that allows for the minimization of code in the client as recited in the claimed invention. Through this cooperation, the amount of software in the client is dramatically reduced because the client is no longer required to construct a standardized document comprehensible by the server system. The method and system of the present invention

transfers the synchronization workload to the server system. In the combination of Bauer and Alam, the workload is shared equally between the server and the client.

Accordingly, claims 1, 14, 21, 26 and 30 are also allowable over the cited references. In addition, the claims dependent thereon are allowable because they depend from an allowable base claim.

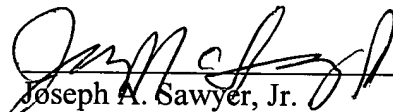
Applicant respectfully submits that claims 1-43 are therefore allowable over the cited references. Accordingly, applicant respectfully requests reconsideration and allowance of claims 1-43 as now presented.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

SAWYER LAW GROUP LLP

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Date



Joseph A. Sawyer, Jr.
Attorney for Applicant(s)
Reg. No. 30,801
(650) 493-4540